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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,286

01/19/2006

Kwang-Yun Cho

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01/07/2010

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EXAMINER

KLINKEL, KORTNEY L

ART UNIT

PAPER NUMBER

1611

NOTIFICATION DATE

DELIVERY MODE

01/07/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/565,286	Applicant(s) CHO ET AL.	
	Examiner Kortney L. Klinkel	Art Unit 1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
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| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/20/2009 has been entered.

Claim 1 was amended. Claim 2 stands canceled. Claims 4-5 remain withdrawn pursuant to 37 CFR 1.142(b) as being drawn to nonelected subject matter. Claims 1 and 3 are under consideration to the extent that they read on a polyoxyethylene-based nonionic surfactant which has an aliphatic alcohol, a fatty acid or triacyl glyceride as lipophilic moiety containing at least 8 carbon atoms and a polyoxyethylene as hydrophilic moiety having 3 to 25 oxyethylene repeating units.

Claim Rejections - 35 USC § 112 1st Paragraph--Withdrawn

The rejection of claims 1-3 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn in light of the claim amendments.

Claim Rejections - 35 USC § 103—Withdrawn

The rejection of claims 1-3 under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 6552080, as per applicants' IDS) as evidenced by the Sigma® (product information sheet for Tween®20, updated May, 2003) in view of Capuzzi et al. (US 5905072 as per applicants' IDS) is withdrawn in light of the claim amendments to further narrow the scope of the adjuvant portion of the composition.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 6552080, as per applicants' IDS) as evidenced by the Sigma® (product information sheet for Tween®20, updated May, 2003) in view of Kang et al. (WO 01/84930).

Kim teaches the agrochemical of formula (II) (compounds 64). Please note also that the agrochemical of formula (I), now deleted from the claims is also taught (see compound 40). Kim also teaches a fungicidal composition comprising these compounds and an adjuvant, namely Tween®20, which is a nonionic surfactant which is a polyoxyethylene derivative of sorbitan monolaurate. It has a calculated molecular weight of 1225 daltons, which assumes 20 ethylene oxide units (Sigma® product information sheet for Tween®20). Tween®20 is a polyoxyethylene alkyl ether and more specifically is a polyoxyethylene-based nonionic surfactant which has an aliphatic alcohol, a fatty acid or triacyl glyceride as lipophilic moiety containing at least 8 carbon atoms and a polyoxyethylene as hydrophilic moiety having 3 to 25 oxyethylene repeating units. The fungicidal composition of Kim contains a ratio of agrochemical to adjuvant of 1:1 to 1:2 (column 51, lines 25-45). The fungicidal efficacy of a composition comprising the compound of instant formula (II) with the Tween®20 adjuvant can be seen in Table 9, please refer to compound 64.

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Kim also teaches that a fungicidal composition can comprise one or more of the fungicidal compounds of formula (I) (column 15, lines 8-10). These compositions can be in combination with a permeating agent (i.e. an adjuvant) such as nonionic, anionic or cationic interface active agents such as fatty acid sodium salts, polyoxy alkyl esters, alkyl sulfonate esters) *inter alia* (column 15, lines 31-35).

Kim fails to teach an adjuvant as necessitated by the instant claims, but rather teaches the adjuvant comprising Tween®20.

Kang et al. teach fungicidal compositions containing polyoxyalkylene alkyl ether adjuvants (abstract). Kang et al. teach that “[a]n adjuvant is a non-pesticidal compound for enhancing a total activity of a pesticide, differently from a co-formulant which controls physical properties of active ingredients to facilitate their handling. Presence of the adjuvant in a pesticidal formulation increases a total quantity of active ingredients which can be contacted with and/or penetrated into a target plant thereby to enhance the activity of pesticide and to remarkably reduce the quantity of active ingredients which needs to be applied.” (p. 1 lines 18-23). Additionally, Kang et al. teach that in order to increase the efficacy of high-activity penetrative fungicide, non-ionic surfactants such as polyoxyethylene alkyl ethers may be used (p. 2, lines 28-29). More specifically, Kang et al. teach that the preferable polyoxyalkylene alkyl ether adjuvant is derived from polyoxyethylene and preferably an ether derived from lauryl, cetyl, stearyl or oleyl alcohol (p. 4, lines 18-24). The fungicidal compositions contain preferably 5-50% by weight fungicide, 10-50% adjuvant and 10-89% solid or liquid carrier or additive and 0.1 to 10% by weight surfactant (p. 5, lines 9-11).

Examples 1-13, and 32-44 are directed to wettable powders containing the fungicide and a polyoxyethylene alkyl ether. Examples 14-31 are directed to dispersible concentrates containing the fungicide and a polyoxyethylene alkyl ether. Several of these examples utilize a combination of two or more fungicidally active agents. Results showing the efficacy of these compositions are shown in Experiments 1-3 on pages 15-29.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to arrive at the instant fungicidal composition comprising an agrochemical of formula (II) and a polyoxyethylene alkyl ether adjuvant with a reasonable expectation that the resulting composition would be effective as a fungicide. One would have been motivated to do so because both Tween®20 and polyoxyethylene alkyl ethers are art recognized functional equivalents, namely they are all agricultural adjuvants. It is *prima facie* obvious to substitute one art recognized equivalent for another. Additionally, one of ordinary skill in the art would be imbued with the reasonable expectation that the resulting fungicide/adjuvant mixture would result in a successful composition having improved systemic fungicidal activity. One would have this expectation since Kang et al. teach that adjuvants, particularly those discussed above, improve systemic fungicidal activity resulting from greater coverage and endurance on the leaves. Furthermore, one of ordinary skill in the art would expect the resulting fungicide/adjuvant composition to exhibit a synergic effect on the activity of the instantly claimed systemic fungicides since this is a known benefit of the adjuvant

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portion of the composition and the instant fungicides are systemic in nature (as evidenced by the examples).

With respect to claim 3, which requires the presence of another agrochemical for preventing or treating plant diseases, both Kim and Kang, as discussed above teach that it is well known in the fungicidal art to combine more than one fungicidally active ingredients. Accordingly, it would be obvious to one of ordinary skill in the art to combine one of them with one or more of the other compounds, with a reasonable expectation for success. "It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). One of ordinary skill in the art would be imbued with the reasonable expectation that the combination of the known fungicide of formula (II) in conjunction with another known fungicide or insecticide or fertilizer, etc. would result in a composition also being useful for preventing plant disease.

Applicant's data in the specification has been considered. Applicant reports several examples of the fungicidal activity of formula (II) both in water and with a surfactant (i.e. an adjuvant). The compositions comprising the adjuvant show better systemic fungicidal activity than those merely containing water as a carrier. This finding is what would be expected given the teachings of the prior art. The adjuvants of Kang

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et al., which are the same as those of the examples, are known to enhance systemic fungicidal activity. Applicant has provided no evidence of unexpectedness.

Response to Arguments

Applicant's arguments filed 10/20/2009 in response to the rejection of claims over Kim et al. in view of Capuzzi et al. have been fully considered, but are moot in light of the new grounds of rejection necessitated by applicant's claim amendments to narrow the scope of the adjuvant. The new claim rejection over Kim et al. in view of Kang et al. teach all the limitations of the claims.

Conclusion

Claims 1 and 3 are rejected. No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kortney Klinkel whose telephone number is (571)270-5239. The examiner can normally be reached on Monday-Friday 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached at (571)272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KLK

/Ashwin Mehta/

Primary Examiner, Technology Center 1600